

APRIL 1992

CHILDREN'S TELEVISION WORKSHOP EXPLORES THE WORLD

3.2.1

CONTACT[®]

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ON OUR COVER

The folks at the American Museum of Natural History are behind this sea monster mask, made by Kwakiutl artist Tony Hunt, Jr. It's part of their "Chiefly Feasts" exhibit. Photo courtesy Royal British Columbia Museum.

Star Struck

Brodie Spaulding, 13, says he's lucky. And there's no doubt about it. Not only did he find a meteorite, but he actually saw it drop...at his feet!

Last summer, Brodie was standing in his front yard in Noblesville, IN, when the fist-sized meteorite landed about five feet away. In fact, it was still warm when he picked it up!

"I was amazed," Brodie says. "It just happened all of a sudden. I heard a real low whistling noise and saw a rock lying there."

Scientists say it's unusual for a meteorite to drop by. The one-

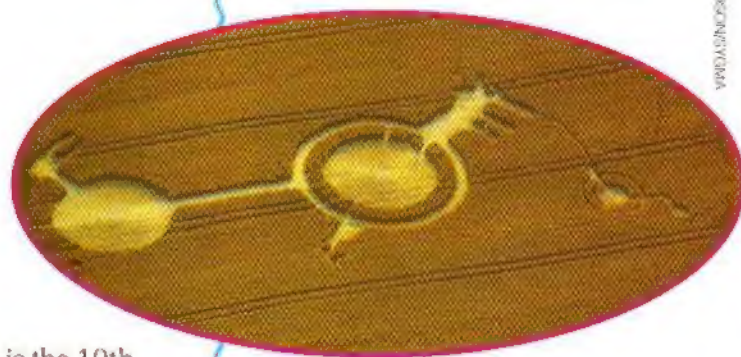


April Fools

Well, it turns out that space aliens had nothing to do with those strange circles in England. (See May '91 issue.)

Two British artists claim they made the hundreds of weird shapes that have cropped up in farm fields over the past 13 years. David Chorley and Douglas Bower say it all started as a practical joke: They wanted to make it look as if a UFO had landed.

Here's how they made the mysterious circles: Bower stood



pound meteorite is the 10th found in Indiana, and only the third anywhere to be seen landing!

"Only one falls on every 600,000 square miles each year," says Dr. Michael Lipschutz, a meteorite expert. "It's *very* rare to have one fall at someone's feet."

Although Brodie had a close call, nobody has actually been hit by a meteorite. No *person*, that is. But 80 years ago, a meteorite killed a dog in Egypt. Talk about dog-gone bad luck!

Story suggested by Jon Morlang, Reno, NV; and Fritz Hieb, Spencer, IN.

in the field and held onto one end of a string. The other end was attached to a wooden plank. Chorley held the plank as he walked around Bower. This flattened down the grain.

Even though these "landscape artists" have stepped forward, some people don't believe them! "They may have caused some of the circles," says one UFO expert, "but not all of them. We'll carry on research to figure out what happened." Now that's really going around in circles!

Story suggested by Joel Dietz, Glenside, PA; and Connie Cheng, Torrance, CA.



PHOTO: NOBLESVILLE DAILY LEDGER

PHOTO: J. D. HUSCHMAN/VOX

Golden Opportuni-tee

Wooden golf tees used to really "tee off" 13-year-old Casey Golden. But not anymore. He invented a tee that doesn't litter the golf course. And even better, his tees save trees—about 30,000 of them. That's how many birch trees are used yearly to make 1.65 million tees.

Casey figured out how to make these problems go away...naturally! His invention is a biodegradable tee, called the BIO-T. Once it's wet, the BIO-T starts to melt into brown goop. It turns into a liquid in just 36 hours. Rain, dew or just sweaty palms will trigger the "meltdown."



PHOTO © BARRY SLAVIN

Casey invented the BIO-T by experimenting in his kitchen. He baked many batches of flour, fertilizer, moss, grass seed, water and applesauce. Finally he came up with the perfect recipe for a sturdy golf tee that could melt.

Casey and his dad have now started a company to make the BIO-Ts. They already have orders for six million! Looks like they've got a guaran-*tee*d winner.

Scratch and Sniff

They don't wear uniforms. And you might say they pant and whine too much. But, then again, the stars of this new series of trading cards aren't ball-players.

They're dogs! And the name of their game is drug sniffing. The dogs are helping the U.S. Customs Service sniff out thousands of pounds of illegal drugs, such as cocaine and marijuana.

Issued by the U.S. government, the trading cards are part of a new anti-drug campaign. (Sorry, you can't buy them in stores or order

them.) The set features 81 of the agency's "top dogs." The cards carry photos of the dogs on the front and important statistics on the back.

And their stats are pretty "sniffy." Take Magnum, age nine, who weighs 60 pounds.

He found 2,000 pounds of marijuana in a big cargo container.

Or meet Moose. The five-year-old, weighing in at 70 pounds, sniffed out 254 pounds of cocaine in a trailer. Now that's a ruff act to follow!

Story suggested by Nicole Smith, Halifax, PA.



So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science story from the news that you think our readers would like to know about. (Be sure to tell us your T-shirt size and where you heard the story.)

Send to:

TNT
3-2-1 CONTACT
Magazine
1 Lincoln Plaza
New York, NY 10023

Bird on a Bun

Moo-ve over, cows. There's something leaner on the market: ostrich!

About 1,000 U.S. ostrich ranchers, who raise the birds for their hides and feathers, are now selling the meat. And people are gobbling it up. One restaurant in California is already buying about 25 pounds of ostrich a week to make ostrich burgers.

Like beef, ostrich meat is dark, tasty and full of protein. But unlike beef, it's low in fat and cholesterol. It even has fewer calories than chicken! So what's next? Ostrich McFingers?

PHOTOS © DOUGLAS BURROUGHS/GAMMA LIAISON



ANY QUESTIONS?

By Sara Shipley

HOW

DOES HAIL FORM?

Hailstones can be as small as a pea or as big as a grapefruit. During summer storms, they may fall at speeds up to 100 mph!

How do these overgrown ice balls get so big? Hailstones form only in the spring or summer months in the highest storm clouds. At eight to 10 miles high, a cloud's water droplets get so cold that some turn to ice.

Strong winds then toss these ice pellets up and down inside the cloud. And talk about a wild ride! With each trip, the hailstones get a new ice coating. Finally the hail becomes heavy enough to fall to Earth.

Big hailstones can damage crops, cars and even humans. People have tried many different methods to get hailstorms to "chill out." Around 1900, a popular way to stop a storm was by firing a loud gun into the air. But people got hurt and it didn't stop the hail. In fact, this "explosive" idea did more harm than the hail!

*Question sent in by
Shelly VanOverloop,
Waterford, CT.*



HOW

DO BIRTHMARKS FORM?

Birthmarks come in many shapes, sizes and colors. They can show up anywhere on your body. You might even have one on your eye.

No one understands yet *why* birthmarks form. But scientists do know that they form when too many tissue cells grow in one area. The most common kind is easy to "spot": It's a brown mole. A mole gets its color from a brown pigment called melanin—the same stuff that gives skin its tone and causes freckles.

Tiny blood vessels give another type of birthmark its color. These birthmarks are called "port-wine stains" because they are often large and red.

But a birthmark can even be colorless. So how do you know if you have one? You might not. Sometimes you need a microscope to spot the tissue.

Most birthmarks are nothing to worry about. If you notice a change in size or color, have your doctor take a look. But otherwise, you can wear your spots as happily as a leopard!

*Question sent in by David Huang,
Englewood, CO.*



WHY

DO DOGS AND CATS SOMETIMES EAT GRASS?

Dogs and cats are carnivores, or meat-eating animals. So why does your pet sometimes munch on the lawn?

No one really knows, but animal experts give a few possible reasons. Eating grass can cause Fido or Whiskers to throw up or have diarrhea. Gross as this may sound, it might make the animal feel better! This may be how it gets something irritating out of its system. Other people think the animals eat grass because they need extra vitamins.

But grass-chomping doesn't always mean your pet is unhealthy. Some animals will chew on anything! And if your dog or cat likes an occasional "salad," don't worry. A small amount of grass shouldn't hurt.

Question sent in by Blueberry Hennin.



WHAT

MAKES HAIRSPRAY WORK?

Next time you reach for the pump, try reading the ingredients on the label. Yikes! Some of them are pretty tough to read—let alone understand. But actually, hairspray is little more than glue.

The key ingredient in hairspray is a sticky material called resin. After it's sprayed, resin coats your hair. This causes a real bonding experience—your hair shafts are "glued" together!

Hairsprays come in two types of containers: pumps and aerosols. Finger power makes the pumps work, but most aerosols are powered by the same chemicals found in car exhaust fumes. The chemicals make it easier to spray, but they also cause smog!

So scientists are looking for ways to make safer aerosols. Until then, you might want to choose hairsprays in a pump bottle. That way we won't all end up in a sticky situation!

Question sent in by Amanda Laughlin, San Francisco, CA.

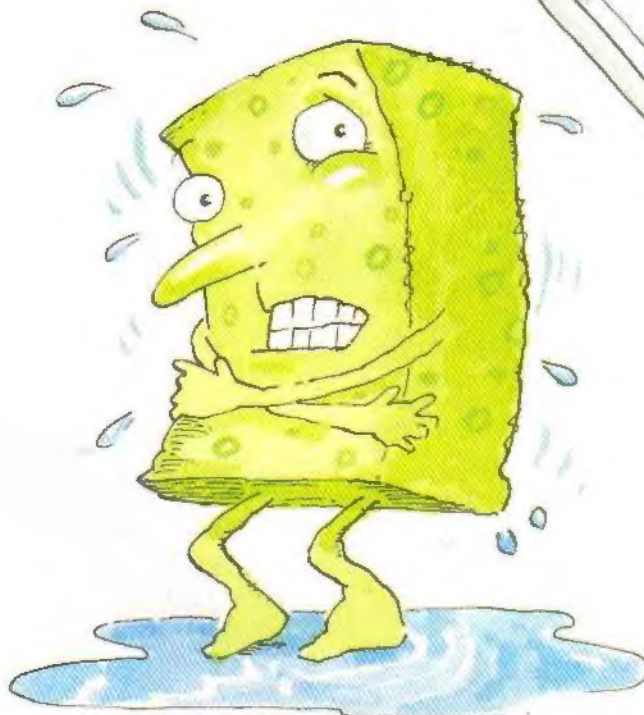
Do you have a question
that no one seems able to answer?
Why not ask us? Write to:
Any Questions? 3-2-1
Contact, P.O. Box 40, Vernon,
NJ 07462

FACT

▼
The average American
eats 277 eggs each year.



▼
Sponges hold more cold
water than hot water.

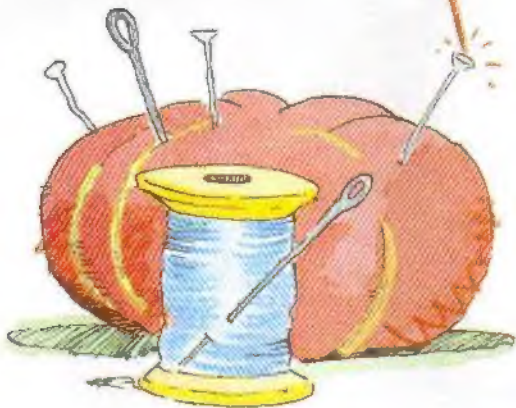


▲
A spacecraft must reach the speed of
24,800 mph to escape Earth's gravity.



Olds

▲
A laser beam can burn 200 separate holes in a pin head.



▲
It's so hot in the Sahara Desert that rain evaporates before it even hits the sand.



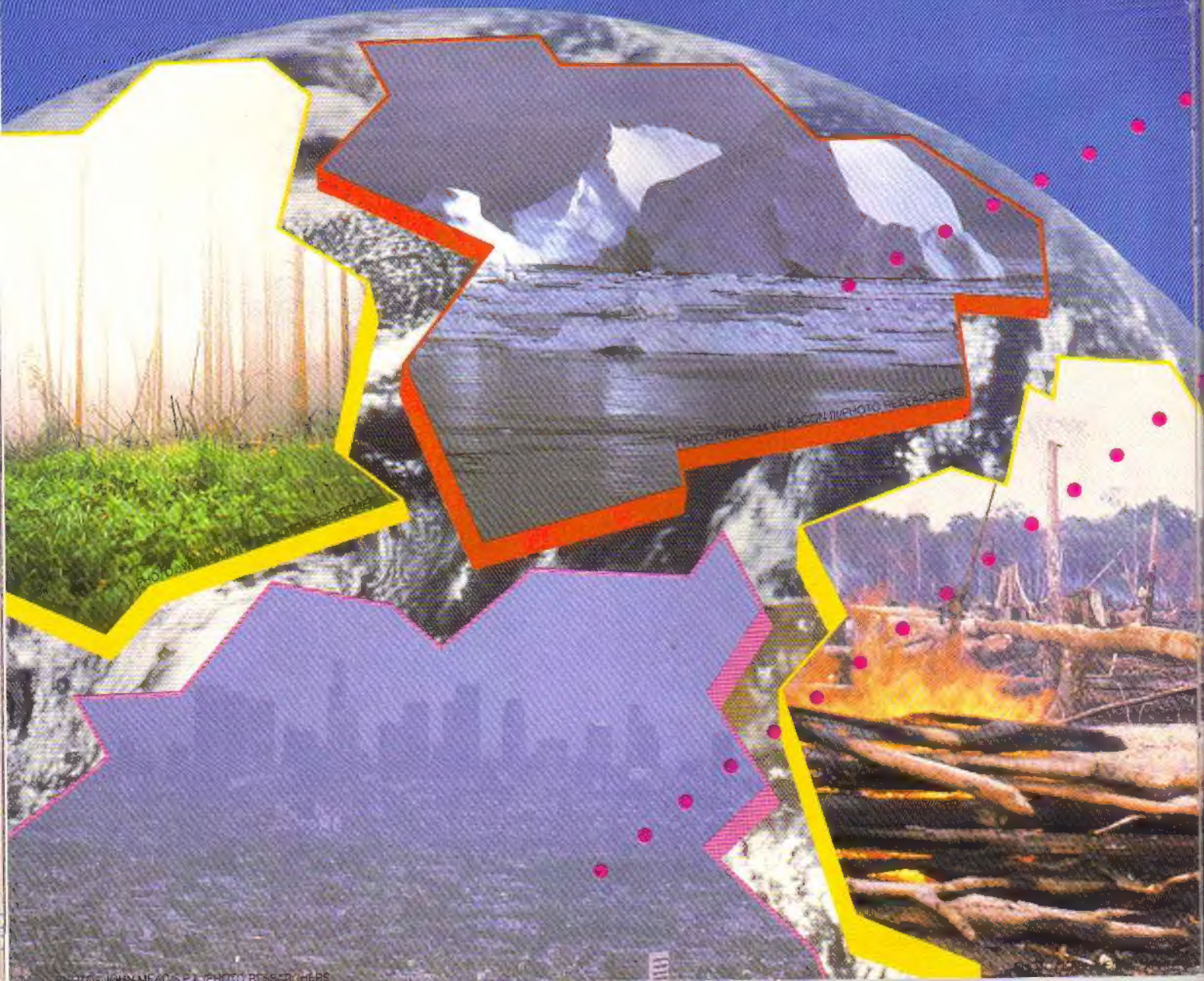
▲
A watermelon is actually a berry.



DOWN TO EARTH

NASA Satellites
Zoom in on
Our Pollution
Problems

By Richard Chevat





Hundreds of miles out in space, a satellite is studying a small planet in our solar system. Every day it points its instruments at the planet and sends back to scientists a stream of information.

It's not an astronaut's job, and you won't find it on the news. But its mission may be one of the most important of the space program.

The satellite isn't studying Mars. The planet this satellite is studying is our own—the Planet Earth. Why is this satellite so important? Because it may help us learn about our own atmosphere. The National Aeronautics and Space Administration (NASA) is the space agency that built this satellite. It is to be launched by the Space Shuttle in Earth's orbit of the stars. Scientists want to know about the effects of pollution.

Scientists used to think of pollution as a local problem. But now, NASA scientists say, pollution is a global problem. Years ago, we started to see that pollution was spreading to large regions. People

were finding that they'd find the stuff was spreading to large regions. People were finding that they'd find the stuff was spreading to large regions. People were finding that they'd find the stuff was spreading to large regions.

A Hole in the Ozone

The ozone layer is a thin layer of gas that protects the Earth from the sun's harmful ultraviolet (UV) rays. It is located about 10 to 15 miles above the Earth's surface. Scientists have discovered that there is a hole in the ozone layer over Antarctica. This hole is caused by the release of certain chemicals into the atmosphere. These chemicals are called chlorofluorocarbons (CFCs). They are used in many products, including aerosols, refrigerators, and air conditioning units. When these chemicals are released, they rise into the atmosphere and break down the ozone molecules. This process is called ozone depletion. The hole in the ozone layer is a serious problem because it allows more UV radiation to reach the Earth's surface. This can cause skin cancer and other health problems. Scientists are working to find ways to reduce the release of CFCs and to protect the ozone layer.

atmosphere Research Satellite. UARS is the largest satellite ever designed just to study the Earth's environment. It was launched last September to study the ozone layer—an important part of the Earth's atmosphere.

Ozone is a gas that occurs naturally in the upper parts of the atmosphere, called the stratosphere. (The part of the atmosphere up to about six miles from the ground is called the troposphere. The stratosphere goes from six miles to about 50 miles high.)

Bombarding the Earth is radiation from the sun. One type of radiation is ultraviolet (UV) rays. Ozone acts like a filter. It screens out the UV rays. It doesn't screen the rays completely, but it prevents them from hitting the Earth at full strength. The UV rays that do get through the atmosphere help plants to grow. They also give you a sunburn if you're not careful. Some UV radiation is good for plants and animals, but too much can be harmful—and that's the problem.

It's become a problem because the ozone shield around the Earth is getting weaker—and humans are the cause. Chemicals leaking from air conditioners, refrigerators and ozone factories have been drifting up into the stratosphere and destroying the ozone layer. So more UV radiation is reaching the ground.

Scientists know what the answer is. UV radiation can be blocked by wearing sunglasses and sunscreen. We can't protect our

plants and animals. The problem is so serious

(leaked CFC's) by the year 2000. But that's not the end of the problem.

"Even if we stop producing CFC's now, the ozone layer will still get worse over the next 20, 30 or 40 years," explains McNeal. "It takes a couple of years for the ozone to get out of the stratosphere."

big need to study the ozone layer. Scientists want to know how fast it can heal itself. Also, new chemicals will have to be developed to run air conditioners and refrigerators, too.

Scientists can experiment with the models to test different ways to save the ozone. The model

and understand the planet as a whole," says Stan

NASA program called the Earth Observing System

lites over the next 10 years. Wilson says that sci-

the environment interact.

It'll be studying things like how large the ice

and what changes are taking place in our

osphere's gases," Wilson explains.

Scientists think the Earth is absorbing

heat from the sun. This causes global warm-

ing. To find out if global warming is taking place,

scientists are measuring the ice at the

South Poles. They detect the amount of

ice that melts each year to year. If the polar ice caps are

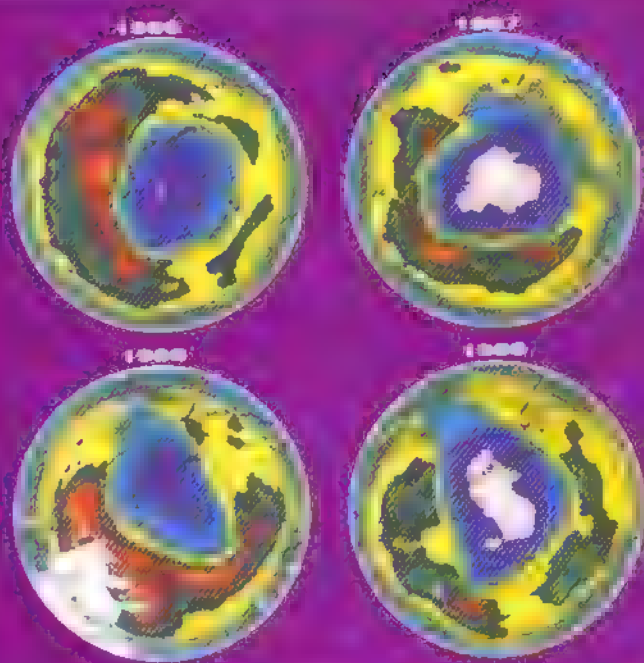
melting, then the Earth's temperature is rising.

Scientists haven't found any

place where the temperature is get-

ting warmer.

But scientists are still studying the problem.

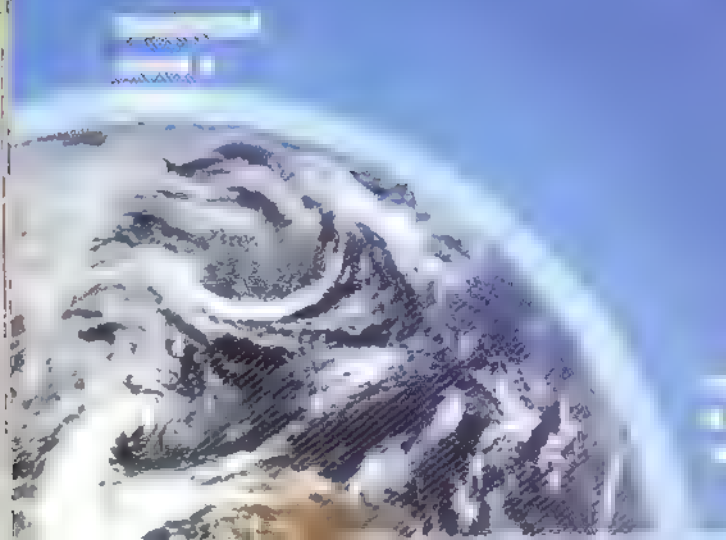


The Nimbus-T satellite made these maps of the Antarctic ozone loss. The pink areas show the hole in the ozone. The purple colors are where the ozone is very low.

PHOTO COURTESY NASA

Earth's Global Warming

tems NASA is studying. "We're trying to look at



...the effects of acid rain on the forest. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain.

know the effects of acid rain on the forest.

Clean Air, Anyone?

...it used to be. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain.

...before they get out of control. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain.

about long-lasting effects.

...T-shirt or a hat. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain. The forest is still recovering from the damage done by acid rain.



PLAYING IT SAFE

...the way you can still have fun in the sun!

☀ Use a sunscreen whenever you're going to spend time outside. (You can check shops. Smart Sunnets should use a sunscreen with a Sun Protection Factor (SPF) of at least 15. This helps to filter out up to 93 percent of the sun's burning rays.

☀ Don't wait until you burn. Apply sunscreen 15 to 30 minutes before you go outside. If you're going to be outside long, look for the words "waterproof" on the label.

☀ Try to avoid being out in the sun's burning rays for the longest hours: 10 a.m. and 3 p.m.

☀ Don't wear tanning beds. They can give you a tan, but they can also give you skin cancer. So all you can do is avoid them. Look for the words "waterproof" on the label before buying them.

☀ Wear a long-sleeved shirt, pants, a T-shirt or a hat.

EXOSPHERE

(300 miles in)

(600 miles)



The Mystery of the Croaking Frogs

By Wendy
Mason

The golden toads should have been jumping for joy. They had a clean mountain home in Costa Rica's Monteverde Cloud Forest Preserve, plenty to eat and enough rain and mist to keep them moist.

Scientists who visited the area in the early 1980's were thrilled to find hundreds of golden toads scattered around three different breeding sites. "They were like little jewels on the forest



A FROG USES ITS EYEBALLS TO HELP PUSH FOOD DOWN ITS THROAT ● A TOAD'S HEART IS BIGGER THAN ITS BRAIN ●

floor," says researcher Susan Jacobson of the University of Miami.

But by 1989, the "little jewels" were gone. The golden toads had disappeared—maybe for good.

Disappearing Act

Fifteen years ago, yellow-legged frogs crowded the High Sierra Mountains in California. "You couldn't avoid stepping on them," says Dr. David Wake, a scientist at the University of California, Berkeley. Now the frogs are gone from most of that mountain range.

No one knows for sure where the golden toads and the yellow-legged frogs went.

But their disappearance are just two examples of a much larger problem. Throughout the world, many amphibians—frogs, salamanders and toads—are disappearing fast.

That news has puzzled scientists. So they recently met to look into the problem. They found that some species are doing better than others. But overall, many amphibian populations are getting smaller.

Dr. James Vial is director of the Environmental Research Laboratory in Corvallis, OR. He thinks there may be reason for worry. "Amphibian populations do go up and down," he told CONTACT. "Species may disappear for one or two seasons, and then come back over the next few years. What bothers us is that the declines are so widespread."

▼ Costa Rica's golden toad

How do scientists know that amphibian populations are dropping? "We count frogs," says Dr. David Bradford, professor of environmental studies at UCLA. "During the breeding season, we search shorelines and marshes for amphibians. We also listen for their calls at night."

Lately, there hasn't been much to hear. But scientists can't agree on any one reason for the silence. "Everybody has a theory to explain the frog declines," says Dr. Wake.

"In Connecticut, they say it's the raccoons. In Brazil, they say it's the cold winters and in Canada, they say the problem is water pollution. We don't know why amphibians are dying off,

but we don't like the message we're getting." The message they are getting may be this: The environment is in worse shape than anybody thought.

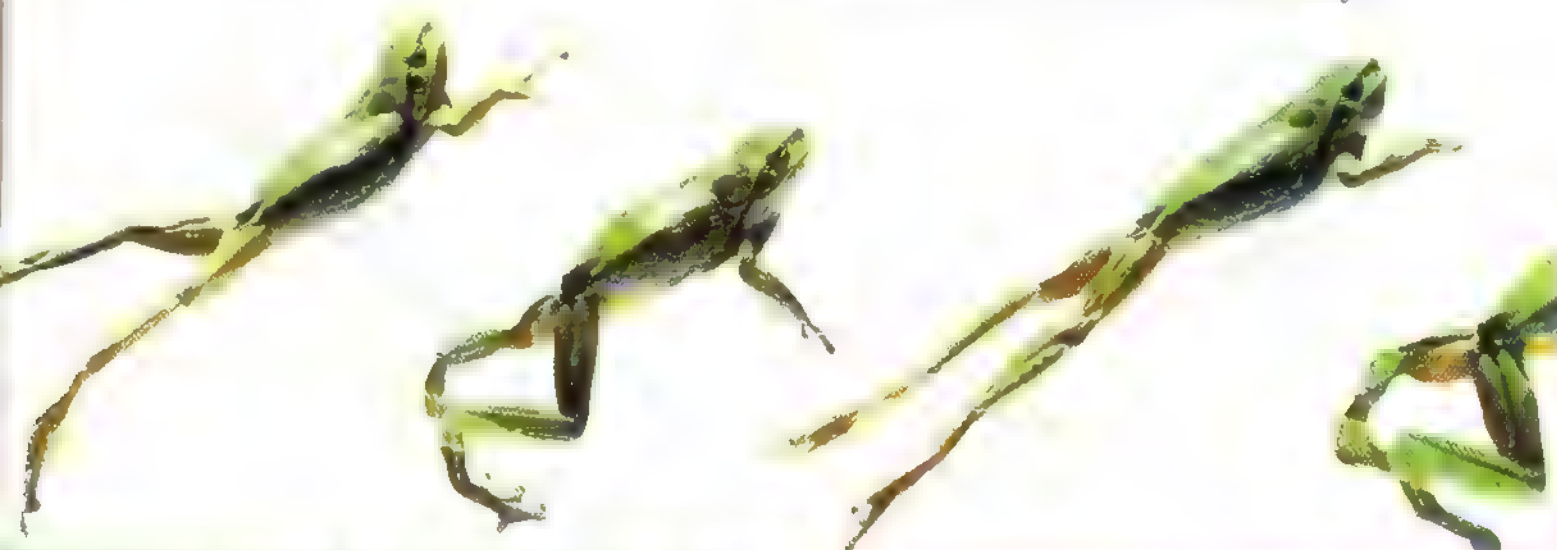
SOS to the World

Amphibians are like living pollution testers. They can tell us a lot about the health of the world we live in. They are usually sensitive to a wide variety of environmental poisons. That's because they live part of their lives in water and part of their lives in damp soil. As a result, they risk being exposed to land and water pollution.

Also, amphibians have no scales to protect them. They breathe in oxygen through their moist skin. And that skin is extremely sensitive to air pollutants and ultraviolet radiation—harmful rays from the sun. (The rays are normally



PHOTO MICHAEL FORD/AMERICAN ANIMALS



FROGS SWALLOW THE SKIN THEY SHED SEVERAL TIMES A YEAR ● SOME SALAMANDERS WEIGH AS MUCH AS 55 POUNDS

"We count
frogs. We also
listen for their
calls at night."



PHOTO BY ANDREW CLUMBERG FOR ARND BRONKHORST



SALAMANDERS CAN GROW BACK MISSING LIMBS AND TAILS • FROGS AND TOADS ARE ABLE TO CHANGE COLORS •

filtered out by the Earth's ozone layer.)

To find out how air and water pollution affect amphibians, CONTACT went to Dr. John Harte. He is a professor of energy and resources at Berkeley. Dr. Harte has studied tiger salamander eggs in the Colorado Rocky Mountains. The eggs had been exposed to acid snow. During the last seven years, he found that the tiger salamander population had decreased a whopping 65 percent.

Dr. Bradford is not surprised.

"Acid rain and acid snow are extremely poisonous to amphibian eggs," he told CONTACT. "They also make adult amphibians get sick more often."

Stocking ponds and lakes with fish that eat tadpoles is another reason for the decline. Once the fish increase in numbers, the frog ponds become frogless. But the biggest problem may be the destruction of a frog's habitat—the area where it lives.

Going, Going, Gone

Janalee Caldwell and Laurie Vitt, two frog experts at UCLA, saw firsthand what happens when a frog's habitat is destroyed. They watched a huge logging operation in Brazil's Amazon rain forest. A stream of trucks took giant trees out of the forest. Then the settlers arrived. They cleared the land for farming by setting the whole area on fire.

"There are 75 species of frogs in that area," says Caldwell. "Very few of them would survive under those conditions. We're seeing habitats drastically reduced. You can't just keep destroying



Tiger salamanders are missing in action.

habitats and not expect things to disappear."

Okay, amphibians are disappearing. So what? Here's what: Frogs, toads and salamanders play an important part in the food chain. They eat insects and are themselves eaten by birds, mammals and reptiles. Their extinction would throw nature out of whack. Many animals would be affected by this "missing link" in the food chain. And one day those animals, too, could disappear.

The amphibians' disappearing act may also be a signal that the Earth is becoming too polluted and sick for *anybody*. As Dr. Wake points out, "Amphibians were here when the dinosaurs were here. They're tough survivors. If they're dying out now, that's definitely a strong message for us." ♦



BEAUTY

HOW A MUSEUM COOK



EXCEPT WHERE NOTED ALL PHOTOS COURTESY AMERICAN MUSEUM OF NATURAL HISTORY

The Kwakiutl Indians live in British Columbia, Canada. Since the 1800's, Kwakiutl (say: *kwa-gi-ULTH*) chiefs have thrown big parties for their tribes. During these feasts, food is served in huge wooden bowls. And in special ceremonies, people wear strange, beautiful masks carved from wood.

The American Museum of Natural History is in New York City. It is also holding a Kwakiutl feast. But it's a feast for the eyes, not the stomach. In an exhibit called "Chiefly Feasts," the museum is displaying the amazing wood-carvings used in Kwakiutl ceremonies.

Anthropologists from the museum visited the Kwakiutl 80 years ago and bought wood-carvings from them. And for 77 years, the objects gathered dust in the basement of the museum. Then, three years ago, Aldona

Jonaitis, an expert on Indians, noticed them and thought, "We have all this great Kwakiutl stuff. We ought to put them on display."

Here's a behind-the-scenes look at how the museum did just that.

Aldona Jonaitis is the curator of this exhibition. That means she's in charge of putting it together from start to finish. The first thing she did was to go to Canada and tell the Kwakiutl about the show. She learned much from them about their lives and ceremonies.

Jonaitis also asked other museums to lend her new masks made by today's Kwakiutl Indians. Then she sent the older objects to the "conservation department."

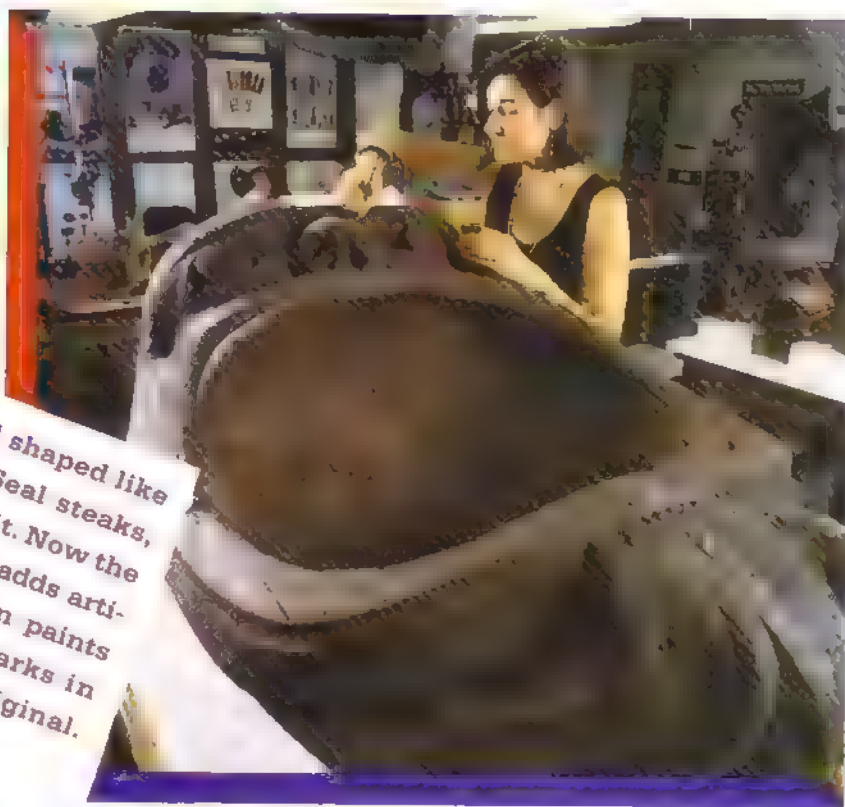
Most of the Kwakiutl objects are made of wood, cord or animal hair. They fall apart easily. The conservation department had to

FAFEAST

UP A NEW EXHIBIT



The museum's storeroom holds the Kwakiutl wood-carvings. Assistant curator Stacy Marcus studies the objects before sending them to the conservation department. She learns as much about them as possible. Kwakiutl Indians flew to New York to tell her how the objects were made and what they were used for. This helped researchers to write signs explaining the exhibit's items.



Sasha Stollman is fixing a bowl shaped like the open mouth of an octopus. Seal steaks, salmon or berries were cooked in it. Now the rotted wood is falling apart. So she adds artificial wood in broken areas, then paints it a wood color. She adds carving marks in the fake wood so it looks like the original.

repair many of them. Sometimes the staff used its imagination to fix things: For example, one mask needed new wooden needles. So someone went to a park, got some twigs and whittled them to look like needles. The staff also had to make sure the objects were strong enough to move without breaking. (Over the next few years, the exhibit will be shown in Vancouver, Canada, San Francisco, Washington, D.C. and Seattle.)

Meantime, the chief designer made a plan of the exhibit hall. He decided what masks would go here, what bowls should go there.

Labels and signs were written and printed. The museum's carpentry shop built platforms and walls for the exhibit hall. The metal shop created large frames to hold up big pieces.

When the hall was ready, the woodcarvings were brought in. The Kwakiutl objects are so

delicate, anyone who touched them wore gloves. Things like feathers and bark could easily break if hung the wrong way. So the "mounting department" made everything the objects sat on or hung from by hand.

When work was almost finished, the curator called people into the exhibition hall for a "dress rehearsal." She gave each person a mask. Then she told them to move around, so she could see how the masks looked in different places. Stacy Marcus, the curator's assistant, told CONTACT, "It was like a human chess game. You couldn't tell how things would look until they were set up."

After months of work, Chiefly Feasts was ready for opening day. The curator and her staff were nervous and excited. But after they saw how amazed the visitors were, they knew their exhibit was a success! ♦

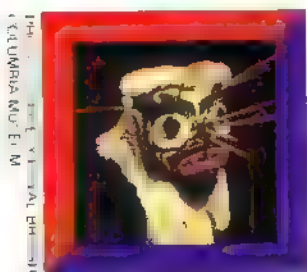
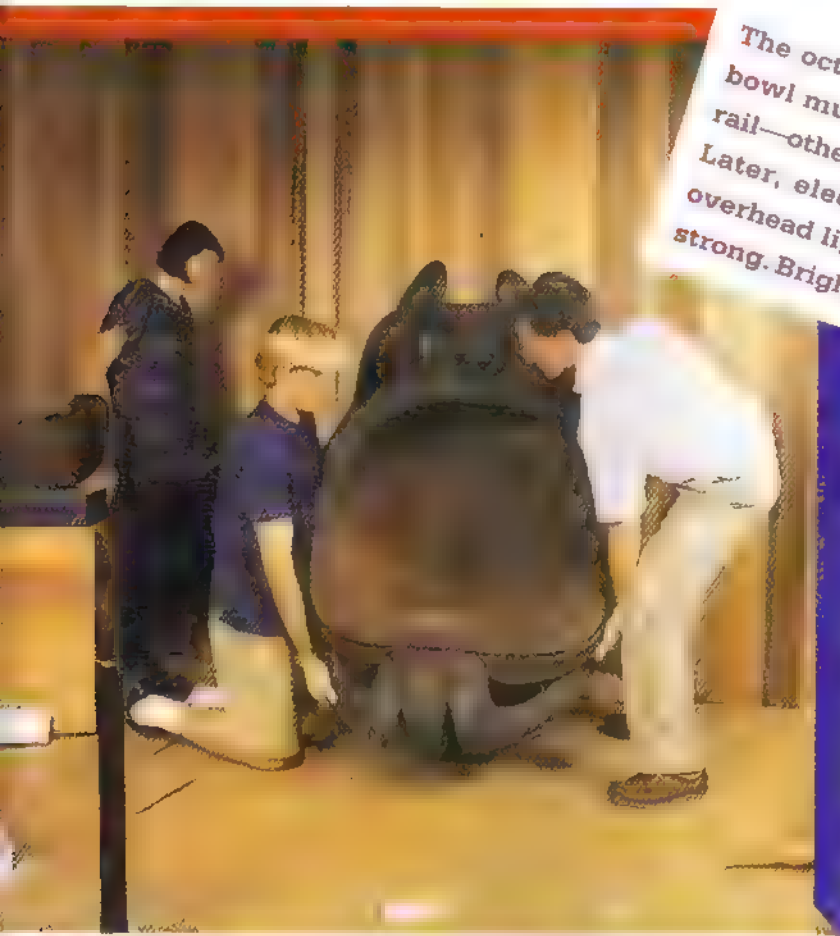


PHOTO BY HANNAH K. JORDAN

In the conservation department, Linda Nieuwenhuizen cleans off a mask that represents an ancestor of the tribe. All the Kwakiutl objects got dirty "from New York dirt" when they were stored, says Linda. So she gently rubs off the dirt with a cotton swab dabbed in water and mild detergent. When she's finished, the paint will be brighter.



The octopus bowl is being placed in the hall. The bowl must not be placed too close to the viewing rail—otherwise people could lean over and touch it. Later, electricians use light meters to make sure overhead lights on this and other objects aren't too strong. Bright lights can damage old wood and paint.

PHOTO BY RICHARD HOLCOMBS



PHOTO BY ARTIST JOYLA
BRIAN S. LEE, MARY M. CLEGG



potlatch host

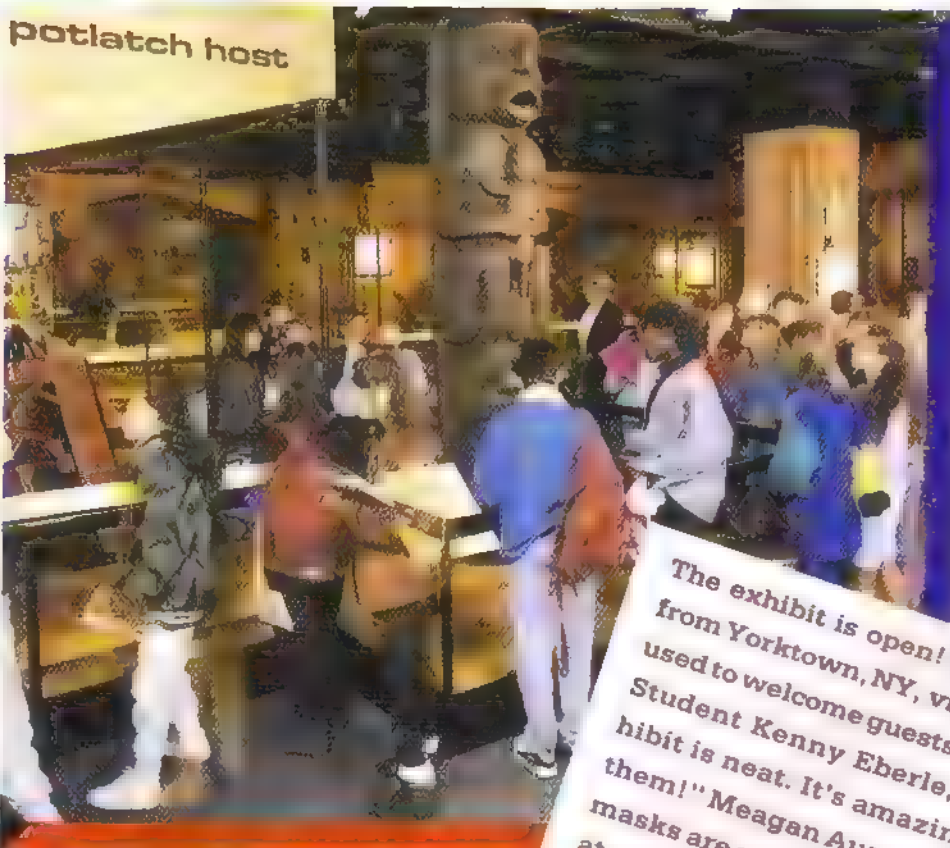
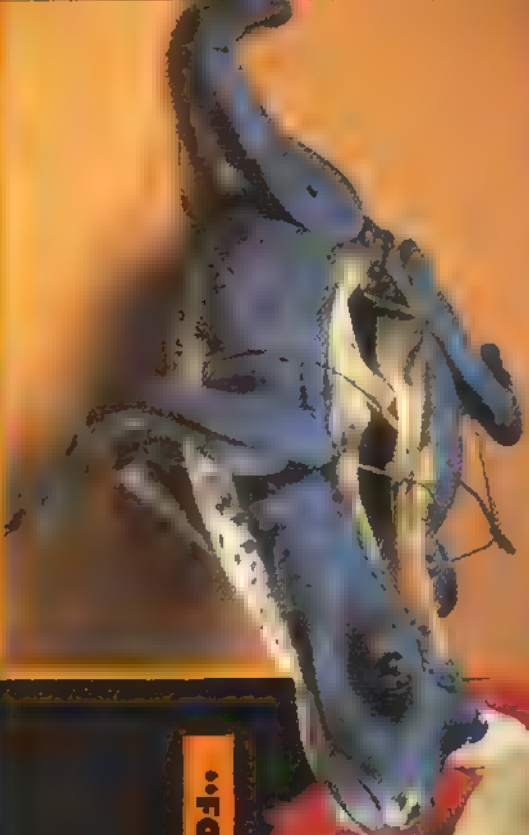


PHOTO BY RICHARD HOLCOMBS

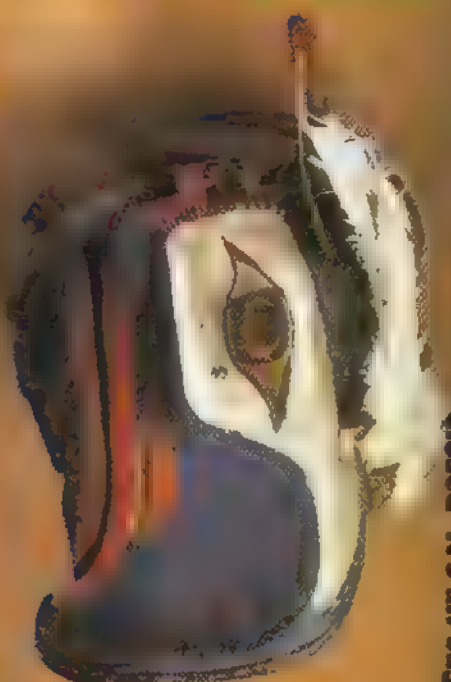
The exhibit is open! These seventh-graders from Yorktown, NY, view a "speaker's post," used to welcome guests to a Kwakiutl feast. Student Kenny Eberle, 12, thinks "the exhibit is neat. It's amazing how they carved them!" Meagan Auser, also 12, agrees: "The masks are cool. They look like they're staring at you."



FROG PUPPET



"FOOL DANCER" MASK



closed it's an eagle.



"TRANSFORMATION" MASK

Open it's a scary face.

"CHIEFLY" TREASURES

MASK OF KWAKIUTL HERO



WOOD AND METAL AXE



APRIL GHOULS!

By Elizabeth Vinton

An April Foolish Animal Quiz

Ugh! These creatures need their weird features to survive. See if you can guess what strange trick each animal uses to stay alive in the wild. These questions may seem tricky, too. But for each question, one (and only one) answer is true.

If you're stuck, the answer is upside down under each picture.



This caterpillar is just an inch long, but it's big on protecting itself. The bug has stinging bristles hidden among clumps of soft, thick hair. This "thick-skinned" bug is called

- A. the porcupine moth
- B. the flannel moth
- C. the polyester moth



Answer: B. The flannel moth gets its name because of its hairy body.

Mudskippers have eyes that act like periscopes. This makes them "seaworthy" in high tides. What's more, these odd creatures

- A. can jump 31 feet in a single leap—farther than the human long-jump record.
- B. use their flippers and fins to pull themselves up mangrove trees.
- C. like to mud wrestle each other.



Answer: B. Mudskippers use their strong chest muscles to climb trees. They also breathe air and "skip" across muddy swamps.



Pow! The European grass snake really knows how to cause a stink. When in danger, it throws up the contents of its stink glands. It also:

- A. sticks out its tongue and plays dead.
- B. sticks out its tongue and spits poison.
- C. sticks out its tongue, yells "Nyah! Nyah! Can't catch me!" and slithers away.

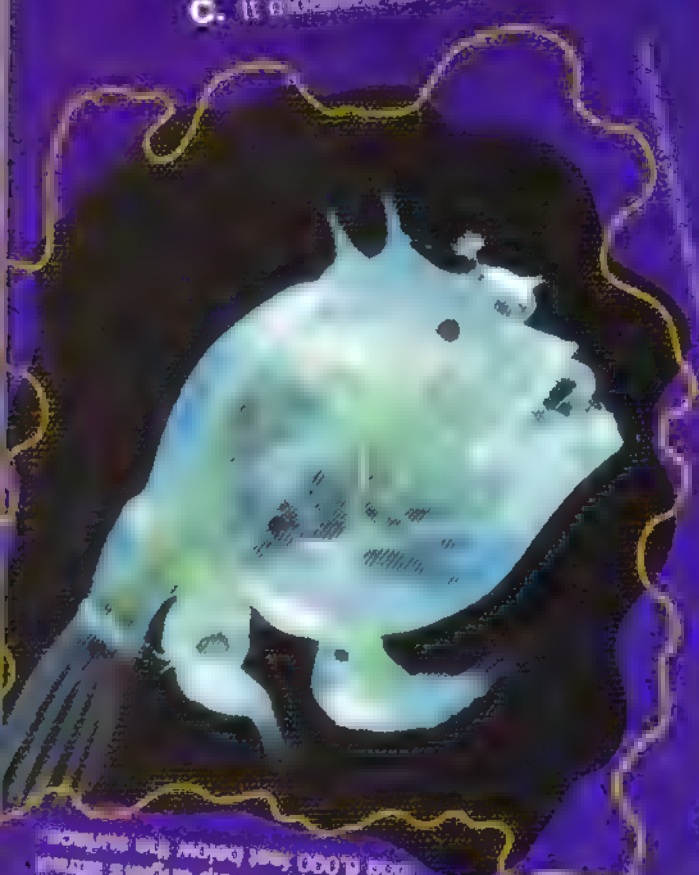
Answer: A. The ringed snake plays dead by throwing up a smelly mixture. It then dangles its tongue and becomes completely still.

The Philippine eagle stands three feet tall and has a mean hooked beak. So what's strange about it?

- A. It eats monkeys.
- B. It flies upside down.
- C. It moneys its hair.



Answer: A. This nine-pound eagle uses its beak and huge talons to catch immature monkeys for dinner.



Male and female deep-sea angler fish are really attached to each other. Soon after birth, the male bites females and never lets go. Eventually, the skin of the female grows over the body of the male. Even fishier-sounding, anglers:

- A. fish for other fish using glow-in-the-dark bait that dangles from their heads.
- B. are the only creatures—besides humans—known to go on diets.
- C. know how to give mouth-to-mouth resuscitation and the Heimlich maneuver.

Answer: A. Glow-in-the-dark hook-like lures help anglers attract food 1,000 feet below the surface.

This spider has terrific night vision. Its huge eyes are 2,000 times more sensitive to light than many other spiders. So it spends the night.

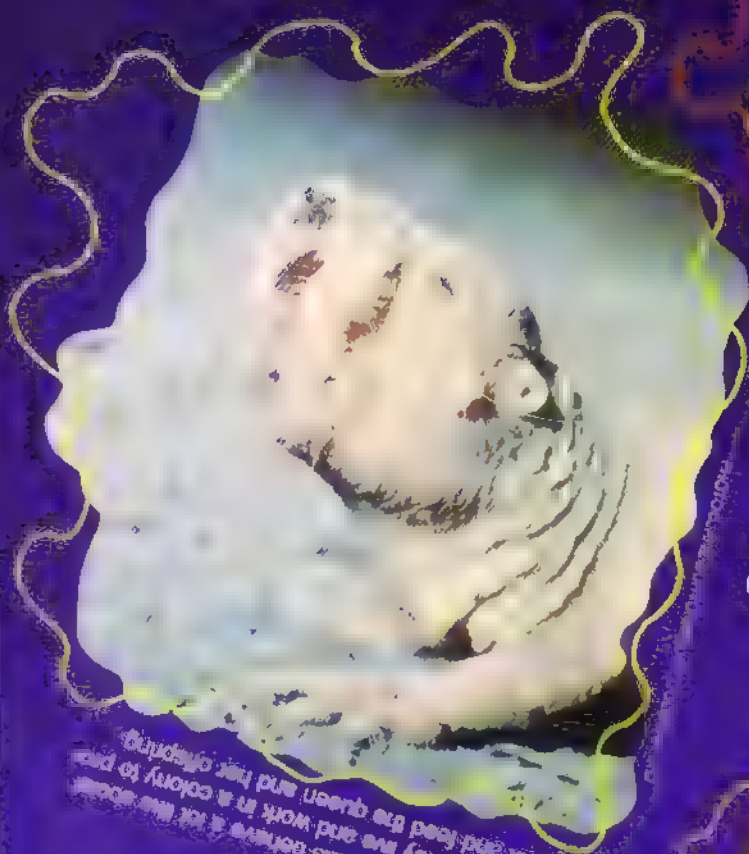
- A. tearing down its elastic web and building a fresh one each morning
- B. building a sticky web that it throws over passing insects like a net
- C. going on blind dates



Answer: B. The netcasting spider holds the tail between its front legs and throws it over its prey.

The naked mole-rat looks like a baby rat and lives underground like a mole. But neither. In fact, this hairless, blind rodent

- A. is related to the Mexican Chiniquist dog
- B. lives in a colony ruled by a queen—just like an ant or a honeybee
- C. has replaced Bubbles the Chimp as Michael Jackson's favorite pet



Answer: B. Mole rats behave a lot like bees and ants. They live and work in a colony, to feed and feed the queen and her offspring.

Slimy Australian frogs are sometimes seen in a cocoon that looks like plastic wrap. What's the cocoon for?

- A. It helps the frog keep moist during the dry season.
- B. It helps the frog float during the flood season.
- C. It's a ready-to-use microwave cooking pouch.



Answer: A. When the desert dries out, the frog gets out of its "bag" and swallows its own water. When the next rain comes, the cocoon turns into a ready-to-use microwave cooking pouch.



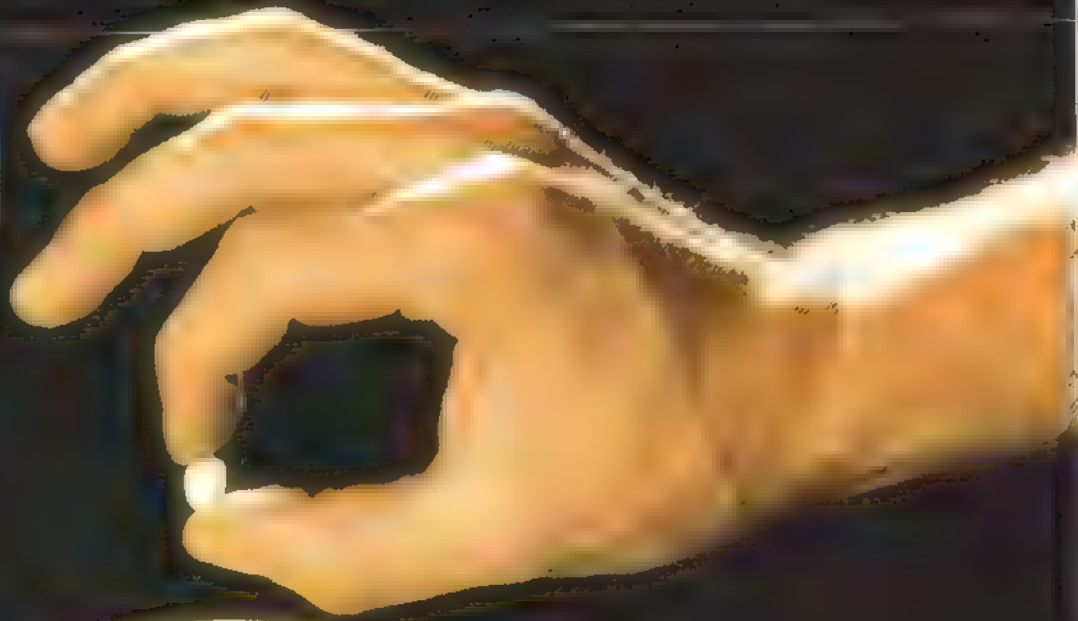
Casey is Creative!

Casey, a golden retriever, is a very special dog. He is no longer a puppy, but likes to think he is. He grew up in a fun place where artwork is designed for neat stuff like stickers, stationery, party favors and school supplies. Casey likes to take credit for inspiring a lot of creative ideas, but he does get a little help from his mother, Lisa Frank.

Find Casey Pup on Lisa Frank products at Wal-Mart, Target, Kmart, Toys'R'Us, Eckerd's and other fine Drug and Discount Department Stores.

Lisa Frank

Kids Like You Gotta Have It!™



Wow! Check out these eggs! Bet you won't find either one on any Easter egg hunt. That's because the 1/2-inch-long hummingbird egg would be really tough to spot. Hummingbirds have the smallest bird eggs in the world.

And though the elephant bird egg is the biggest of all bird eggs, good luck trying to find one. (Elephant birds are now extinct.) This foot-long egg weighs about 18 pounds and can hold about two gallons of fluid. That means 33,000 hummingbird eggs could fit inside it. What a trunk!

THE TIME TEAM

The Big Blow Out

By Curtis Slepian

"Owww!"

"What's your problem, Sean?"

"Yowee!"

"Stop being so crabby!"

"I'm not crabby. I'm being crabbed!"

Sean pointed to his foot. Pinching the sneaker was the claw of a large crab.

Jenny ran across a beach, pulled the crab off and threw it into the sea.

A moment before the crab got hold of Sean, both teens had been in Jenny's room in 20th-century America. She had been saying, "Sean, I'd rather just go on a picnic."

Sean made a face. "That's boring. Let's take a time trip. I'm in the mood for action."

Jenny didn't want to go alone on a picnic, so she hit the button on her tachyon machine.

This was a small, laser-powered device. Jenny had built it for her high school's science fair. The project was on unusual sub-atomic particles known as tachyons. But when Sean damaged the tachyon machine, it somehow became a time machine—except they never knew where or what year it would take them.

The moment after Jenny had pressed the button, the teens appeared on a beach. And a moment later, the crab attacked Sean.

Now, while Sean inspected his foot, Jenny looked around this unknown world. In one direction, she saw nothing but water. In the other direction, a stone wall stretched along the beach. In the distance was a tall green mountain.

Nearby, steps led from the beach through an opening in the wall. Jenny took out her pair of universal translators and gave one to Sean. She had gotten

them on a trip to the

These tiny earphones

wearer to understand and speak any language.

"Want to boogie through the door?" asked Sean, pointing his thumb at the opening.

Jenny paused. She felt the warm sun and heard the pounding surf. "Nothing bad is going to happen in a place like this," she told herself. Then she took a deep breath and nodded. "Okay, let's go."

Through the Door

The teens climbed the steps, past narrow dark walls. At the top of the stairs, they heard a murmuring sound. Sean said, "I'd better peek. No telling who or what we're going to run into."

He inched along the wall, feeling the cool stone on his back. He slowly looked around the edge of the wall. He turned quickly to Jenny. Her heart was pounding. What danger were they about to face? He gestured for her to look. What she saw was totally unexpected: people. Ordinary, normal-looking people on an ordinary summer morning.

On second glance, they weren't completely normal. The men and women were wearing what looked like bedsheets wrapped around them. Jenny thought the sheets were called togas. On their feet were strange lace-up leather sandals. And they all had funny haircuts.

As the teens walked through the streets, they realized they were in the deep past. There were no

21st century.

allowed the

cars or electric lights, no plastic or machines.

People stared at the teens' clothes, so the two sightseers from the future kept moving. They passed a shop selling fruits and vegetables. Jenny asked the shopkeeper the name of the city.

"Young lady, this is Herculaneum, named after the mighty hero Hercules. Your clothes are odd. Are they the new fashions from Rome?"

"Rome?" said Sean. "You mean like where Caesar and cruel dudes like that rule?"

The man became nervous. "Julius Caesar ruled years ago. Vespasian is our emperor now. Don't speak of his cruelty or you will be arrested."

The teens moved on. Herculaneum was a nice city. And it had a great view of a tall mountain.

"We should get some grapes and bread and picnic by that mountain," said Jenny.

"Boring," replied Sean. "Why don't you hit the button on the tachyon machine, so we can go someplace exciting. There aren't even gladiator contests here."

"Watch *American Gladiators* on TV when we get back," said Jenny. "Let's go on a picnic."

Sean smirked. "That's real cool." A rumbling sound cut the argument short.

"Must be a thunderstorm coming this way," said Sean, looking up.

"There isn't a cloud in the sky," mused Jenny.

"There's got to be something hot going on in Roman times," continued Sean. "Let's hitch out of Herculaneum."

Jenny said, "I just want a nice, peaceful trip." Suddenly, she fell.

Sean started cracking up. "Hey, clumsy, you wanted a trip, you got it!"

The next instant Sean also fell down. "The Earth is shaking. What's going..."

A Peak Experience

Sean was drowned out by the loudest sound he had ever heard. The teens looked up and saw that the top of the mountain overlooking Herculaneum had blown away! Smoke poured from its peak.

"That's not a mountain," cried Jenny. "It's a volcano!"

The teens ran down a street. As the cloud from the volcano spread, the sky became darker.

People rushed around

in a panic. One man hurried by, muttering, "It's the end of the world. And I never got to finish my desert at lunch!"

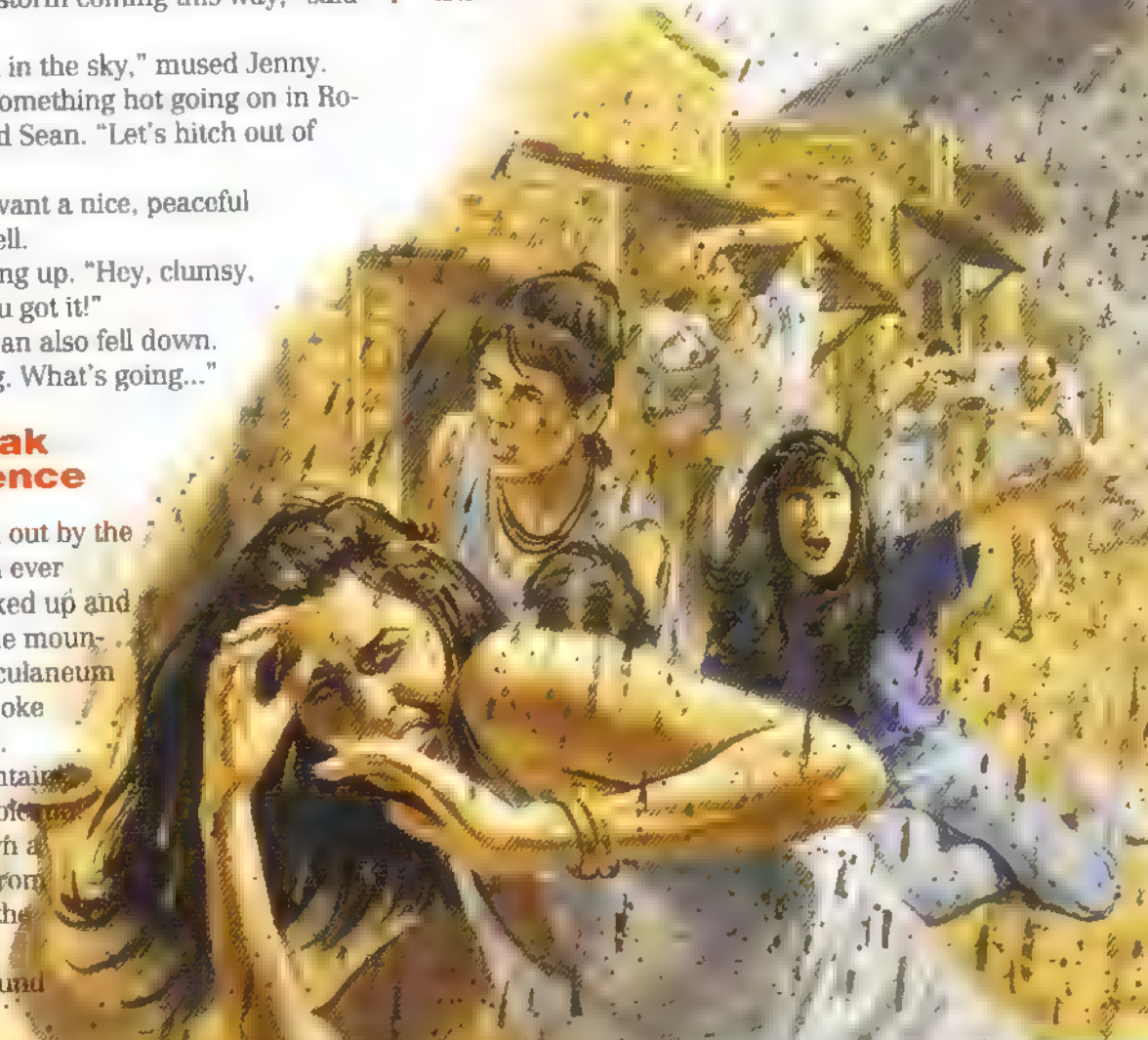
Jenny grabbed his toga and asked, "What's the name of that volcano?"

"Where are you from? It's Vesuvius."

Jenny's face paled. "Mt. Vesuvius was one of the most awesome volcanoes in history. When it erupted in the first century A.D., its ash and mud buried the nearby city of Pompeii. It happened so fast, lots of people died. Archeologists dug up Pompeii in the 18th century and found that everything in the city had been preserved. They even discovered unbroken eggs!"

"That's pretty amazing," commented Sean, as he dodged a screaming woman.

"There's something even more amazing," continued Jenny. "Many people there were buried by volcanic ash. The bodies rotted, leaving a hollow space. When archeologists filled the holes with plaster, the casts showed what the people looked like at the moment of their deaths. Now tourists visit



Pompeii to see an ancient Roman city."

"But what happened to Herculaneum?" asked Sean, getting tired of her lecture.

Jenny shrugged. "I never read about it."

"Great."

It was the middle of the day, but it seemed like sunset. The cloud had blocked out the sun.

"Let's watch the volcano erupt," said Sean.

Jenny frowned. "It's too dangerous."

"C'mon," pleaded Sean. "This is a great science lesson. And we can leave anytime we want."

But most people weren't waiting to leave. They were hitting the road, carrying their belongings through streets covered in dust and ash.

Some were making a terrible mistake. They were heading towards Pompeii!

Rain of Terror

Late in the evening, munching on bread taken from a deserted store, the time travellers watched the flames shoot out of the volcano. Then there was another terrible explosion

"Ouch," cried Sean, rubbing his head. "Something hit me." The volcano had shot out hot rocks. The stones were raining down!

Peppered by pebbles, the teens ran into the deserted house of a rich person. At the center of it was a garden open to the sky. Sean walked under a balcony. "I think it's safer under this."

"Do you smell something?" Jenny asked.

"I took a shower this morning!" huffed Sean.

"No, it's like rotten eggs—sulfur. The volcano is giving off poison gas!" Jenny exclaimed. "I think the cool night air is making the volcanic cloud come down." The air was thick with ash. It was getting in their eyes and mouths.

"Uh, maybe we'd better go home," said Sean. He didn't care if he sounded chicken.

Another explosion split the air. Part of the balcony collapsed. Sean was trapped behind fallen wood and stone!

"Are you okay?" shouted Jenny.

"Yeah, but I can't move this stuff." The smell was getting worse, and both teens were coughing badly.

From behind the rubble, Sean shouted, "Beam us out of here!"

"But Sean, you're about five feet away from me.

I don't know if the time field stretches that far. I might leave you here to die!"

Sean was silent for a moment. "You have no choice. We'll both suffocate from the gas and ash in a few minutes. Do it!"

"Here goes," Jenny said, closing her eyes tight. She pressed the button.

When she opened her eyes, Jenny was back in her house, the moment after she and Sean had left it. She looked around—no Sean!

"Oh, Sean, I've left you in Herculaneum!" She started to cry.

There was a cough from the bathroom. Sean stepped through the door! Of course! He was five feet away in Herculaneum, and he ended up five feet away in the present.

Sean looked terrible. He had a large bump on his head, scratches on his arms, a bad cough—and a sheepish look on his face. "You know what, Jenny? I think I'd like to go on a picnic after all." ♦





▼ Shocking, Isn't It?

Can you find the only spot to place this fake rubber hand so it won't touch any of the joy buzzers? You must stay within the rectangle.



▲ Bleah!!

Four of these packs contain normal gum. The other three packs hold trick gum that turn teeth black! Can you follow the clues below to pick out the surprise packs?

1. Either the top pack or the bottom pack is trick gum.
2. None of the trick packs is the same color.
3. No two packs of trick gum are next to each other.

Z Z L E S

Start

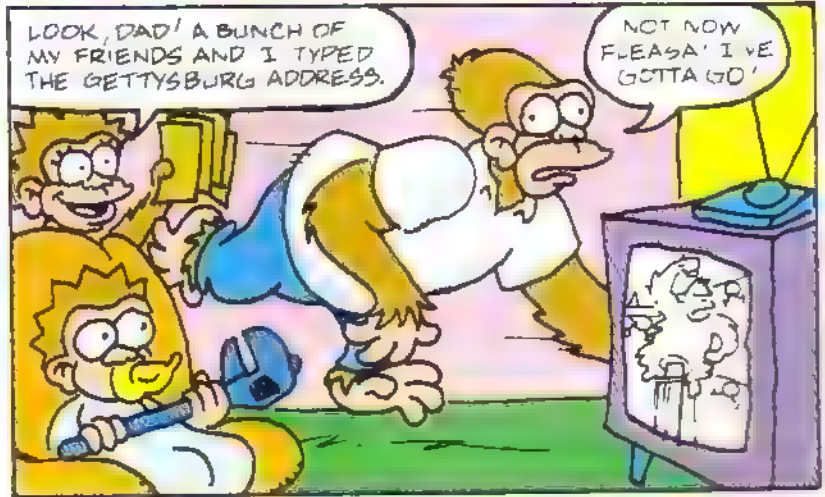
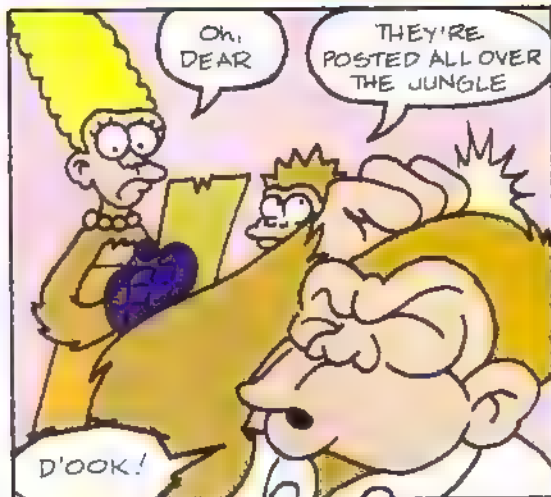
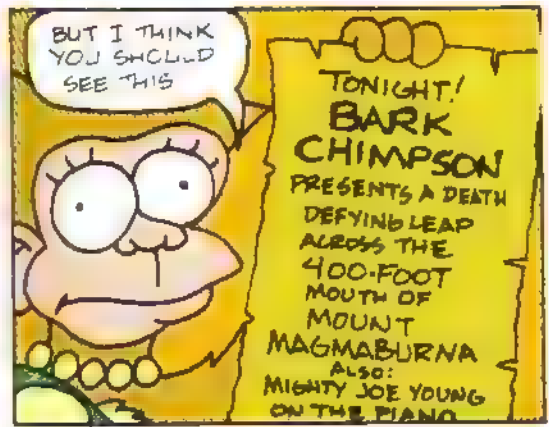
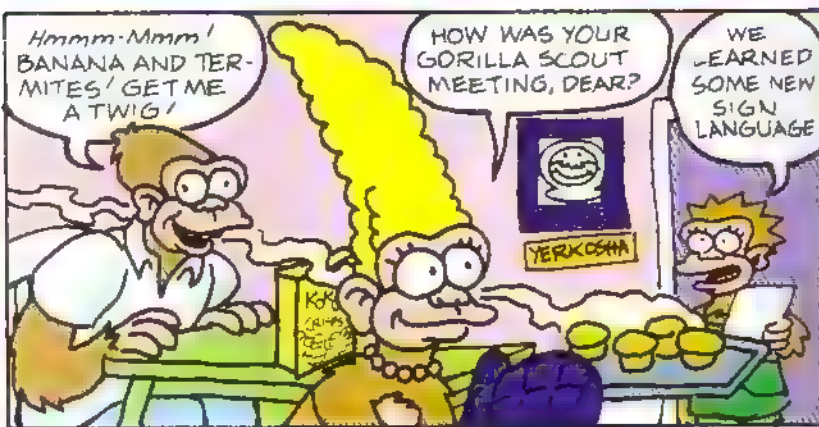
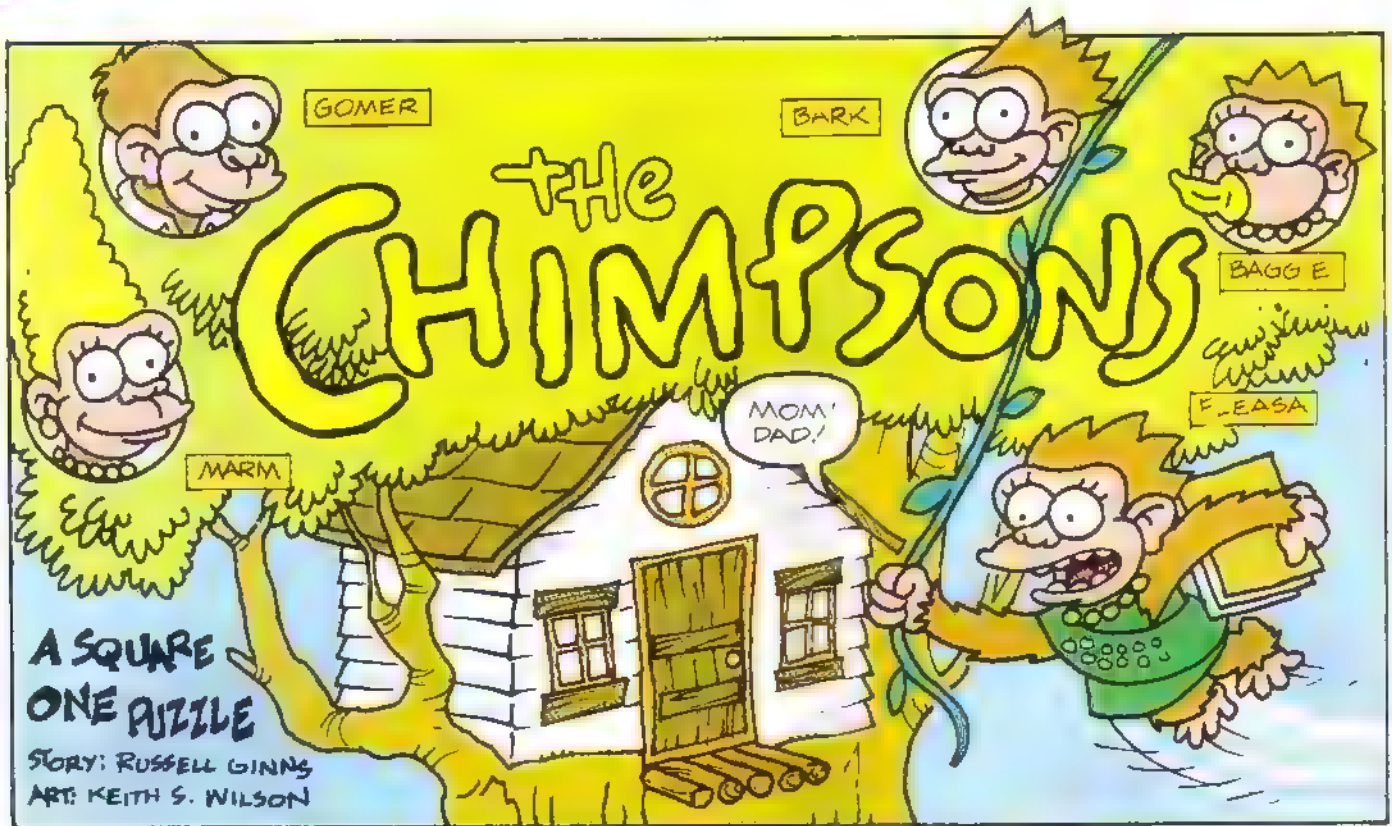


Finish

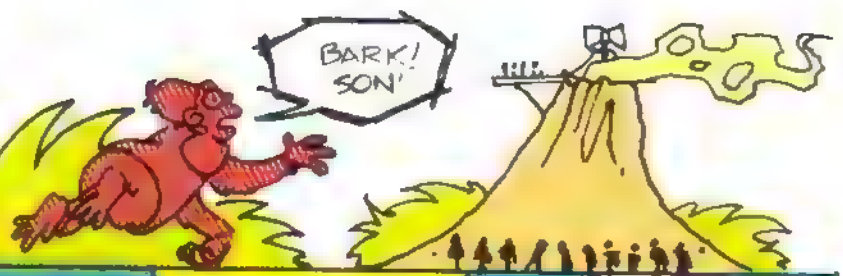
Waiter!

Can you find a path from the top of these little plastic bugs to the bottom? You must move in a straight line and can only change direction when you land on a big bug. You may not move diagonally.

Answers on the Did It page



WELCOME TO
MOUNT MAGMABURNA
OVER 50 MILLION BURNED!



PLEASE SON, DON'T MONKEY
AROUND WITH THE VOLCANO!
IT'S 9000 DEGREES!



EARTH DAZE

AHH! What a picture-perfect way to spend Earth Day. But don't be fooled. Everything's not as perfect as it appears. Can a bird really fly upside down? See if you can find 22 more things wrong with this picture.

Flip to the Did It page for the answers. And happy Earth Day!



What's Wrong With This Picture?





Hello, hackers! Slipped Disk here, computer expert and floppy disk jockey. Floppy (he's my dog and assistant) and I were just working in our compugarden. Last year, we planted microchips, old disks and printer ribbons, but nothing grew. So this year we're planting beans and tomatoes. It's fun, but Floppy keeps digging up old computer disks.

And speaking of old, let's answer some computer questions before we get any older. Here's one from **Peter Eskow**, 12, of North Edison, NJ. Peter asks:

"How does a computer remember the time and date when it's shut off?"

Peter, some people think computers should have watches. But I think that's silly—computers don't have any wrists, so where would they wear them? But computers do have a clock inside. It's run by a battery that charges whenever the computer is turned on. That's why your computer can always tell you what the time is.

The next question is from **Robert Murdough** of Ithaca, NY. Robert wants to know:

"When you load a BASIC program, are all the variables cleared?"

First of all, Robert, by variable you mean those letters in a program that stand for numbers. For example, if I wrote a program to count the number of disks Floppy dug up in the garden, then S might stand for the number of disks. It's called a variable because the number of disks varies, or changes, from day to day (depending on

If you immediately run the program again, the computer does not clear the variables. In our example, S would still equal 15, and this might make the program run incorrectly. So, it's a good idea to include commands that set the value of your variables at the beginning of your program.

And speaking of programs, I have time for one more question before this program is over. Here's one from **Alena Hoffman**, 9, of Ten Brooks, WA. Alena asks:

"Why does my computer make a humming noise?"

Alena, your computer probably hums because it knows the tune but doesn't know the words. No, seriously, many computers make a humming noise when you turn them on. That noise is the sound of a small fan whirring in the back of the computer. Computer circuits can get hot, especially as they are made smaller and smaller. The smaller the circuit, the more electric current is jammed into a small space.

The fan keeps the computer from getting too hot, which can wear out its delicate electronic parts.

And speaking of fans, I hope I hear from my fans before I return next month. So send your computer questions to:

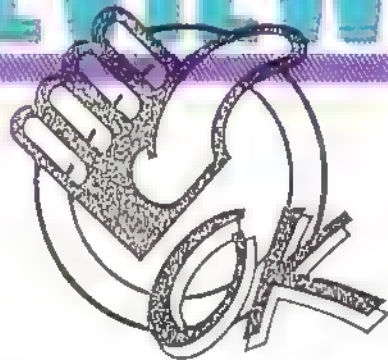


how busy Floppy is).

When you load and run a BASIC program for the first time, all the variables in the program automatically start out equal to zero. Another way to say this is that the variables are "cleared." But after the program ends, the variables keep their last value. That is, if I had counted 15 disks by the time I finished running the program, then S would equal 15.

THE SLIPPED DISK SHOW
3-2-1 CONTACT
1 LINCOLN PLAZA
NEW YORK, N.Y. 10023

REVIEWS



BOOKS

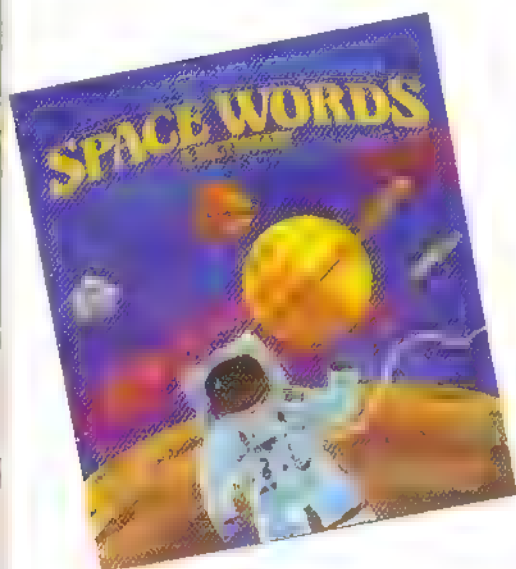
Space Words

by Seymour Simon

Harper Collins, \$14.95

What's a quasar? A nebula? A black hole? Here's a cosmic dictionary that gives definitions of some far-out words. Not only are the illustrations fun to look at, but they help you understand more about the universe. So don't leave your home planet without it.

—Robert Moll



Extremely Weird Primates

by Sarah Lovett

John Muir Publications, \$9.95

Fabulous close-up photographs show primates as you've never seen them: from little mouse lemurs to giant lowland gorillas to those most unusual of all primates—human beings. Great photos, cool illustrations and fascinating facts make this an excellent introduction to these magnificent mammals.

—Rhetta Aleong

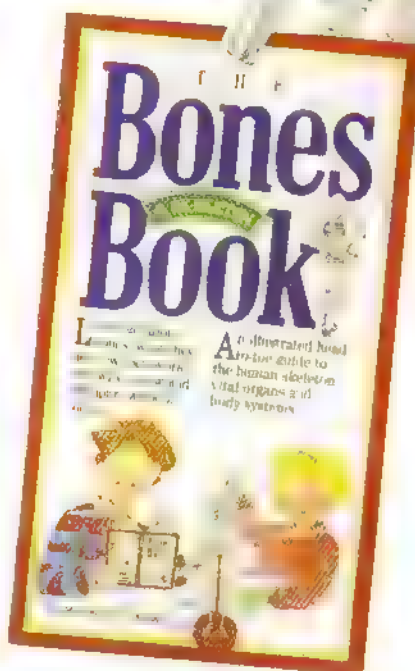
The Bones Book

by Stephen Cumbaa

Workman Publishing, \$14.95

Make no bones about it—this is a great book if you're interested in knowing your body in side out. As a bonus, it comes with a plastic model of a skeleton, along with a display case. And you don't have to be Doogie Howser to snap together the bones. All this should put you in the right "frame" of mind to learn about the human body.

—R.A.



SOFTWARE

Swamp Gas

For Macintosh computers

Inline Design, \$49.95

You're an alien from another planet. Your goal is to zoom around the U.S. in your flying saucer, testing your knowledge of geography by finding different landmarks. Mission accomplished, you relax in the Mother Ship's Alien Arcade, where you play some really spacey video games. Warp speed ahead!

—R.M.

Pilotwings

For Super Nintendo Entertainment System, \$49.95

If you've got the right stuff, join the Flight Club. Fly by the seat of your pants in a biplane, perform aerial stunts with a rocketpack and hang glide over an island! These challenges mastered, you can get behind the controls of an attack helicopter. Great graphics make it seem like you're really flying high!

—R.M.



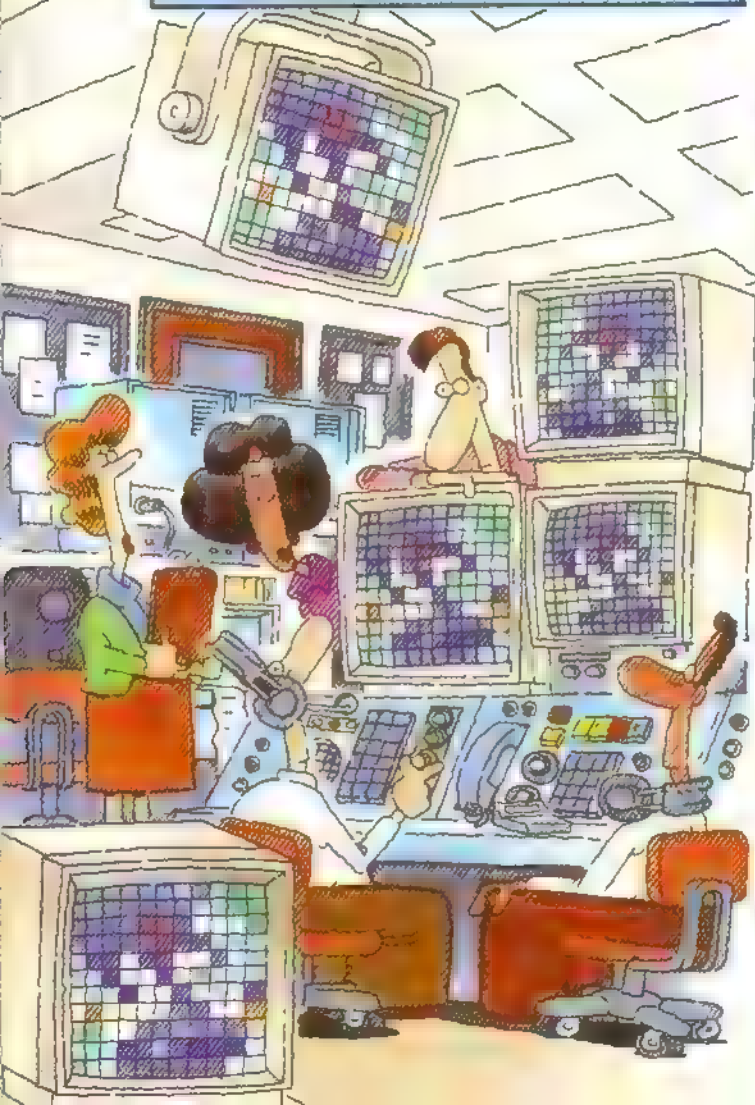


By Russell Ginns

MISSION TO PLANET EARTH

Five satellites have sent back images of our blue planet. But something seems to be wrong with the lens of one orbiting observer. Can you zoom in on the screen that shows a different picture of Earth?

You can observe the answer on the Did It page.

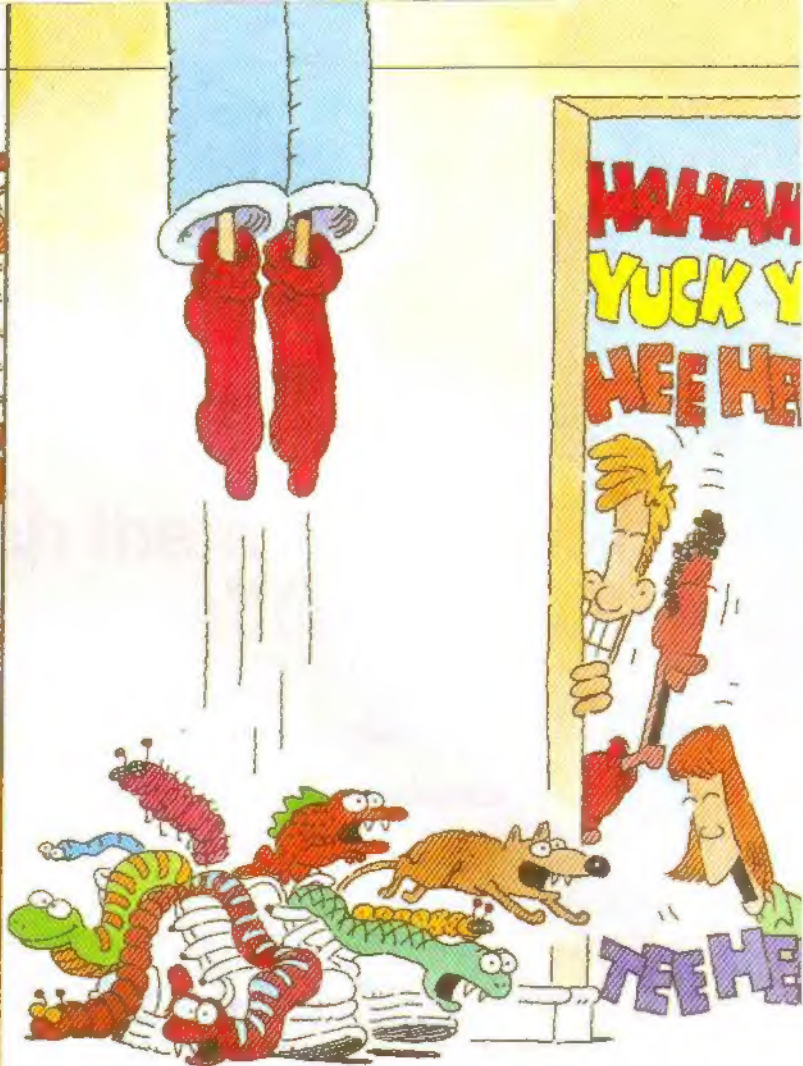


GOING FOR CROAK

Scientists think the world's frogs are vanishing. But maybe they're just hard to find—like the ones in this rain forest. How many frogs are in this picture?

Hop to the Did It page for the answer.





A THOUSAND YUCKS

EEK! Somebody stashed some creepy creatures in Ryan's sneakers. Solve this puzzle to discover whether Albert, Frank or Beth was the fiend who pulled this April fools trick.

Unscramble the five animal names below. (Look back to the story on page 22 for help.) Then, the letters in the shaded boxes will spell out who played the prank.

The answer is on the Did It page.

LERANG

--	--	--	--	--	--	--	--

HSFI

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CLATRAPERIL

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LEMO

--	--	--	--	--

ATR

--	--	--	--	--

SRAGS

--	--	--	--	--	--

KNAES

--	--	--	--	--	--

UDM

--	--	--	--

IPSPREKS

--	--	--	--	--	--	--	--

Did it

THE CHIMPSONS

The previous volcano-jumping record was 300 feet. Gomer beat that by at least 200 feet. So he went at least 500 feet. Since the volcano's mouth is 400 feet, Gomer cleared it easily.

EARTH DAZE

Here are the 22 other wrong things in the picture. They are listed as they appear in the scene, left to right, back to front: sneakers on the barbeque grill, mixed-up numbers on the clock, the man handing over an upside-down ice cream cone, an upside-down bench in the picnic area, a boy playing catch with a fish on a plate, a dog making a phone call, the soccer player wearing two different shoes, the Earth Day banner reading April 32 instead of 22, a cow up in a tree, a boy ice skating on the sidewalk, a bicycle with a square wheel, a person skiing down a grass hill, a man reading an upside-down newspaper, a bench with one odd leg, a woman walking an alligator, people playing volleyball with a watermelon, a cat sitting on top of the pond, an octopus following the ducklings, a woman water-skiing on the pond, a man rowing a motorboat, the upside-down umbrella on the hotdog stand and grapes growing on a tree.

BLEAH!!

The pack in the middle is the only blue one, so it must be one of the three trick packs. Since no two trick packs can be next to each other, the white packs right above and below the blue pack are out. That leaves the white pack second from the bottom. Since that's a trick pack, the bottom red pack is also out (no two trick packs are next to each other). One of the trick packs must be either at the top or bottom. Since it can't be the bottom one, it must be the top pack.



A THOUSAND YUCKS

From top to bottom, the five animal names are: angler fish, caterpillar, mole rat, grass snake and mudskippers. The prankster is Frank.

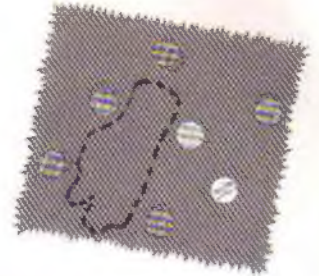
MISSION TO PLANET EARTH

The picture on the top right screen is different.

WAITER!



SHOCKING, ISN'T IT?



QUACK-IUTL



GOING FOR CROAK



NEXT MONTH

Here's what's coming at you in the May issue of CONTACT.

VIRTUALLY REAL?

Strap on your special goggles and get ready to enter an artificial, computer-made world that looks so real it's...unreal!

ARACHNOPHOBIA

Scorpions are the arachnids most people love to hate. But scientists say these lean, mean fighting machines are more fascinating than frightening. Read why.

AND MUCH, MUCH MORE!

Put the right magazine in your child's hands...

and watch the fun
and learning begin!

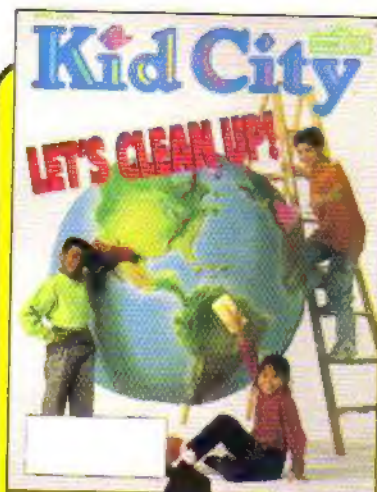


**PRE
SCHOOL**

ages 2 through 6

SESAME STREET MAGAZINE

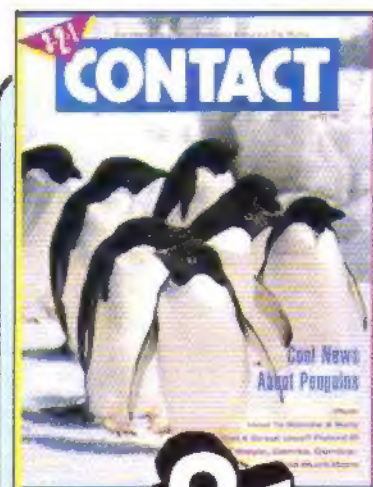
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ages **6 to
10**

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ages **8 to
12**

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